

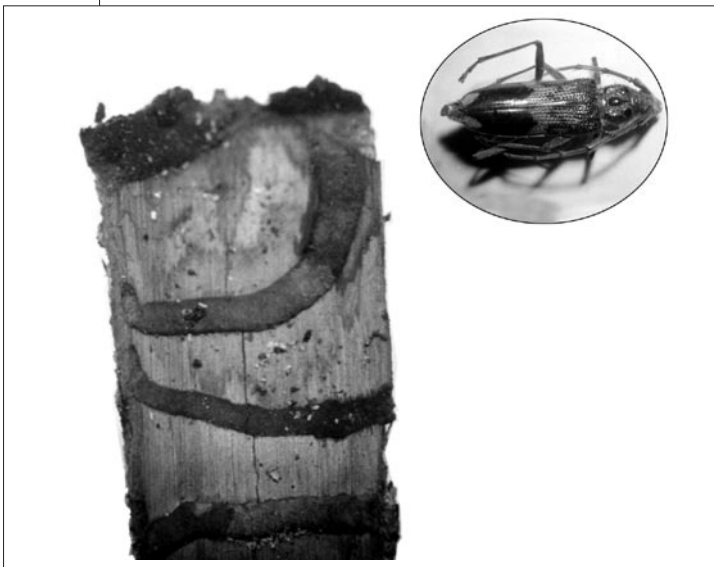
# Facilities Quarterly

ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY FACILITIES DEPARTMENT NEWSLETTER

APRIL  
1996

## BERKELEY LAB'S TREES: THE NEED FOR ACTION

The unmanicured, natural look of Berkeley Lab's landscape is an important part of our work environment. However, most of the trees onsite are recent additions, having been planted in the last 30 years; previously, the site was predominantly grassland. These trees—primarily eucalyptuses, pines, and firs—were planted without consideration for local climate, soil conditions, or natural pests.



*The long-horn bore and an example of tunnels created by its larvae.*

This lack of initial planning and a history of deferred maintenance have contributed to the declining health of the Lab's trees. Facilities is now implementing a vegetation maintenance program to reverse this decline and provide for the long-term sustainability of Berkeley Lab's landscape. This program includes replacement of many trees.

The eucalyptuses are in jeopardy largely because of a severe frost some eight years ago that damaged many throughout the Bay Area. Although Berkeley Lab's trees were thought to have escaped the worst effects, the Lab's arborist has found that most were in fact significantly weakened and are now subject

to internal rot. Many of these eucalyptuses are expected to fail in the next five to seven years. These damaged trees are vulnerable to parasitic infestation and viral infection, and have an increased likelihood of losing limbs or falling—a hazard that has prompted UC Berkeley to end the practice of holding class sessions in the Eucalyptus Grove.

To make matters worse, the natural enemies of the eucalyptus are finally catching up with it. The long-horn bore has already destroyed approximately two-thirds of the eucalyptuses in southern California. Since its first appearance in the Bay Area just a few years ago, the bore has spread quickly. At Ardenwood in Fremont the number of bore-damaged trees has increased from six to 1,200 in a year and a half. Two hundred trees at Mills College in Oakland show damage, and the bore has been found at points as distant as Stanford University and Point Pinole. The damage is actually caused by the bore larva, which attacks the cambrian layer of weaker trees.

Another source of stress for the Lab's trees is the excessive density of the stands. The Lab's eucalyptus trees are much closer together than the 8 to 10 meters typical for natural growth. Pines and firs planted as visual screens have never been thinned out, and many are now infected with pitch canker and other viral diseases that can

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## TREES

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easily spread to healthy trees. Some pine trees onsite show large viral balls. Several examples of this can be seen near Building 83.

Under the vegetation maintenance program stands of eucalyptuses, pines, and firs will be thinned to healthy densities. Weak and senescent trees

will be eliminated. Quality stands, landmark trees, and all native trees except some second-growth oaks in dense plantings will be retained. Majestic natural trees in Blackberry Canyon, including oaks and bays, will not be touched. Special precautions will be used in removing trees with

viral infections to prevent their spread.

Defense against the long-horn bore could also include introduction of a parasitic insect that dines exclusively on bore larvae. This insect is the size of a gnat and doesn't bother humans. Because it is such a picky eater it will disappear when its food supply is exhausted.

The benefits of removing the trees include the improved viability of remaining eucalyptuses, pines, and firs; "freeing" of native trees, such as oaks, from the eucalyptus canopy; reestablishment of native species; and reduction in the risk of damage from wildland fire. Facilities' approach will be to work with the natural vegetation, cycles, and forces present here. New trees will be selected and located for long-term viability.

Removal of trees will take place over eight to ten weeks and will involve chainsaws, trucks, and heavy equipment. A more gradual approach was considered but found to be far more expensive. Removing trees one by one would cost up to \$1,000 per tree and wouldn't help restore the vigor of the remaining trees. By carrying out the project in a short time frame, the Lab was able to contract with a firm to recycle the trees for pulp.

Facilities will keep the Laboratory community informed as planning and scheduling for this project proceed. Information/comment meetings will be scheduled in the near future; watch *Currents* for times. For information on noise-producing activities on any given day, please contact Bob Berninzoni at extension 5576.



### FROM THE FACILITIES MANAGER...

I would like to welcome all NERSC personnel. Facilities stands ready to support your program. If we can help in any way, please call the Work Request Center at 6274.

Facilities placed the highest priority on projects for NERSC and is meeting the challenge of having the computers in place by April. Credit goes to Kirk Haley as project manager for coordinating the

main NERSC work with the necessary peripheral projects. The Small Projects Group (headed by Bill Wu), space coordinator Lisa Sullivan, and move coordinators Ronnie Woods and Martin Dooly all have made major contributions. In addition, we should not forget the staff that worked in the background, including the shops, preventive maintenance techs, and the professionals who spent many weekends at the Lab ensuring that equipment was installed correctly and managing planned power outages.

Speaking of power outages, praise goes to Jon Gibson, John Hutchings, Richard Baker and Mahesh Gupta for restoring power through the Big C substation in less than four hours on a very rainy Sunday.

In other areas of the department, metric fasteners and tools are now stocked in Building 78; we have worked out a vegetation/fire management plan with the campus and the surrounding community; and the Hazardous Waste Handling Facility (Building 85) and the new conference center in Building 54 will both be completed this summer.

On top of all this, the dream of every Facilities Manager is coming true: we have received funding for exterior maintenance. As soon as we are sure the rains are over, we will start on the 50 complex, repairing the exterior, sealing windows, and painting.

For all that you've done, Facilities Department; **Bravo zulu!**

*Bob Camper*

## FACILITIES DEPARTMENT

Facilities provides Berkeley Lab with a full range of architect and engineering, construction, and maintenance services for new facilities and modification and support of existing facilities.

Architect and engineering services include planning, programming, design, engineering, project management, and construction management for new facilities and modifications to existing facilities. Maintenance and construction functions include custodial, gardening, and lighting services; operation, service, and repairs or replacements to equipment and utility systems; and construction of modifications, alterations, and additions to

buildings, equipment, facilities, and utilities. Additional services include bus and fleet management, mail distribution, and the logistics functions of stores distribution and property disposal.

Ongoing Facilities activities include renewal and upgrade of site utility systems and building equipment; preparation of environmental planning studies; in-house energy management; space planning; and assurance of Laboratory compliance with appropriate facilities-related regulations and with University and DOE policies and procedures.

The Work Request Center expedites facility-related work requests, answers questions, and provides support for facility-related needs.

## FOCUS ON SERVICE: THE BERKELEY LAB MAILROOM

Located at the top of the hill, Berkeley Lab's mailroom personnel are usually too busy handling the 8000 different parcels, packages, letters, and cards arriving each day to notice the weather, passing deer, walkers, or joggers outside Bldg. 69.

Rick Briseno is supervisor; the crew consists of Lee Bell, Linda Mendonza, Lazarus Pete, and Mark Orviss. They are dedicated to speedy, accurate delivery of mail and quick dispatch of outgoing official mail, both local and international.

Incoming US Postal Service mail is picked up twice a day at UC's Carleton Street Mail Center. Sorting

begins immediately and continues throughout the day. Distribution to the mailstops starts in late morning and continues into mid-afternoon. Interoffice mail picked up on this distribution run is sorted for delivery the following day.

Each week *Currents* is included in the mailbag. Monthly statements from the Accounting Department mean distribution of an extra 20,000 sheets of paper right around the 5th or 6th business day of the month.

Timely delivery of first-class and interoffice mail depends very much on having a mailstop clearly written as part of the address. Letters without a mailstop go to the

mailroom's lookup bench. After the mailstop is marked, the letter or parcel is put back into the delivery stream, perhaps one to three days delayed. Magazines and catalogs with mailstop addresses get lower priority than other mail, but they will be delivered. Catalogs and other bulk-rate mail with incomplete addresses are put directly into recycling bins.

Outgoing mail is stamped and dispatched each day at four o'clock to either the US Postal Service or an independent carrier if the mail is going overseas.

Call Rick Briseno at ext. 4630 for information.

## COMPLIMENTS

- Cindy Jo, Larry Gilbert, and James Martinez of the Transportation Team acted quickly to switch two helium supply trailers for the Superconducting Magnet Test Facility in the pouring rain. Paul Bish, Al Leitzke, and Ron Scanlan wrote to John Bowerman, "Without your people coming through for us, we would have had to abort a critical test."
- Robert Pankhurst of DOE's Oakland Operations Office thanked Fred Angliss for his help in the seismic review of Bldg 280 at the Stanford Linear Accelerator Center. "You added the credibility to our review that only a recognized expert could," Pankhurst wrote. "I was, therefore, able to give my management full assurance that the building was safe to occupy."

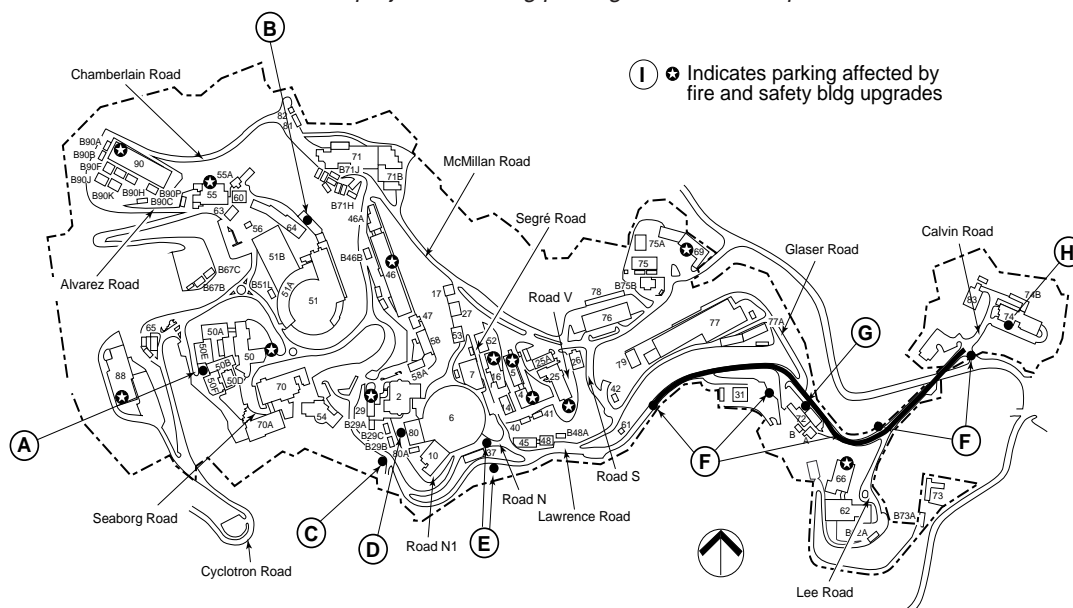
## WORK REQUEST CENTER

Telephone	6274
Fax	6272
Quickmail	Facility
E- or VAX-Mail	Facilities@lbl.gov
Mailstop	76-222

WRC welcomes questions or comments about the Facilities Quarterly.

# CONSTRUCTION AND YOU

Current construction projects affecting parking or vehicular or pedestrian circulation



**Project Contacts.** The name in parentheses after each project is the Project Manager (PM) or other person who is responsible for project oversight: coordinating all phases from design through construction; controlling cost, scope and schedule; and ensuring client satisfaction. This person will be happy to answer any questions about the project.

## NERSC

(A)	APRIL	MAY	JUNE
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Construction continues at Bldg 50B, the west side, including 50E and 50F. Parking will be restricted. (Kirk Haley, x5973)

## Bldg 64 Cooling Towers

(B)	APRIL	MAY	JUNE
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Facilities is starting the demolition of the cooling towers behind Bldg 64. Construction vehicles will cause occasional delays on Alvarez Road. (John Pickrell, x6710)

## Bldg 29 Parking Area

(C)	APRIL	MAY	JUNE
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Site work continues. About 12 parking spaces between the Big C Substation and the Cafeteria are used for construction. (John Pickrell, x6710)

## Bldg 6/80 ALS Structural Biology Support

(D)	APRIL	MAY	JUNE
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Completion of construction is anticipated in July. The 20 parking spaces on the west side of Bldg 80 will be used by the contractor as a laydown area for the duration of the project. (Joe Harkins, x7486)

## Bldg 6/37 LCW Piping

(E)	APRIL	MAY	JUNE
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Work includes a new concrete trench across the roadway and new piping from Bldg 37 to 6. Traffic will be interrupted during trenching and parking will be lost for the laydown area. (John Pickrell, x6710)

## East Canyon Electrical Safety

(F)	APRIL	MAY	JUNE
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The Bldg 66 parking lot will be used for cable storing and pulling operations. (John Pickrell, x6710)

## Bldg 72C Laboratory and Office Addition

(G)	APRIL	MAY	JUNE
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The new structure will be located at the north end of Bldg 72C in an existing parking area. Site work will require relocation of an existing office trailer. A few parking spaces will be reserved for the contractor during construction. (Greg Raymond, x4284)

## Bldg 74 Animal Care Facility

(H)	APRIL	MAY	JUNE
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Work is starting on animal care and treatment room facilities on the 2nd floor of Bldg 74, including walls, doors, plumbing, electrical, flooring, etc. The subcontractor will use 3 spaces next to Bldg 74. (John Pickrell, x6710)

## Fire & Safety Upgrades

(I)	APRIL	MAY	JUNE
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Parking spaces adjacent to the east wing of Bldg 50 will be used as a contractor laydown area. Work is scheduled to continue through July. Construction also continues in Bldgs 4, 5, 16, 25, 29, 46, 55, 66, 69, 88, and 90. Parking spaces adjacent to these buildings may be reserved for construction operations. (Richard Stanton, x6221)

## ON THE DRAWING BOARD

*projects in study or conceptual design*

### Blackberry Switching Station Replacement

The Blackberry Switching Station Replacement Project is the last major element in the master plan to rehabilitate the Lab's electrical power system and improve its reliability and safety. The project will upgrade the existing 12-kV power system and use circuit breakers provided in the FY87 improvements to Grizzly Substation. In addition to installing new 12-kV switchgear and cables, the project will eliminate the Big C switching station and switchgear at Bldg 51 and the Bldg 51 substation, and replace outdated 480 V load centers. (Richard Stanton, x6221)

### Mechanical Systems Modernization, Phase 1

This first project in a series will upgrade high-priority equipment in building and support mechanical systems throughout the Laboratory. Replacements in this project will include cooling towers, heating hot water boilers, air fans, steam boilers, air compressors, water chillers, emergency generators, and ancillary piping and control systems. (Pablo Orozco, x5820)

### Radio Communications Upgrade

The proposed GPP project will provide a complete emergency, security, and mobile maintenance radio system. Facilities improvements for the new radio system will include an unmanned modular radio communication shelter, free-standing radio tower, emergency generator, site utilities, and landscaping. (Chuck Taberski, x6076)

## IN PROGRESS

*funded projects*

### Building 72C Laboratory and Office Addition

Construction of an addition to Bldg 72C began in December and is scheduled for completion in July 1996. The addition provides three electron microscope laboratories on the first floor and ten supporting offices on the second floor, for a total area of 285 gross square meters (3,067 square feet). Direct access from the existing building is provided by corridor extensions on both levels. (Greg Raymond, x4284)

### Sanitary Sewer Upgrade

Now in pre-design, this project will replace about 1,066 m of underground sanitary sewer lines. The system is over 50 years old, and degeneration has resulted from the past practice of discharging corrosive substances and from unstable geological conditions. Sewer breaks, offsets, obstructions, and undulations caused by ground movement and settling have resulted in excessive maintenance, sewer line cleaning problems, and possible soil contamination. (Pablo Orozco, x5820)

### ALS Structural Biology Support Services

Construction is continuing with installation of wall framing, piping, and equipment. This project includes a build-out of the Bldg 80 high bay area into a complete second floor and installation of about 900 m<sup>2</sup> of lab and

office space in this area and the adjacent second floor of the ALS. Completion is expected in July 1996. (Joe Harkins, x7486)

### Bldg 84 Human Genome Laboratory

Mass excavation is completed. Installation of the concrete foundation and steel building frames is in progress. The Human Genome Lab will be a 3,800 m<sup>2</sup>, 3-story, state-of-the-art molecular genetics research facility. The building will be adjacent to existing Bldgs 74 and 83. Project completion will be in late 1997. (John Musante, x5769)

### Energy Conservation Upgrades

Expansion of the Energy Monitoring and Control System (EMCS) continues. This system provides central monitoring and control of space-conditioning systems, including boilers, hot water pumps, air-handlers, and cooling towers. (Chuck Taberski, x6076)

### Bldg 29 Parking Area

Site work is in progress for the Bldg 29 parking area, which will provide about 42 parking spaces in the heavily populated central Lab area. The project includes site preparation, engineered fill placement, drainage, paving, lighting, guardrails, hydro-seeding, fence relocation, and striping. (John Pickrell, x6710)

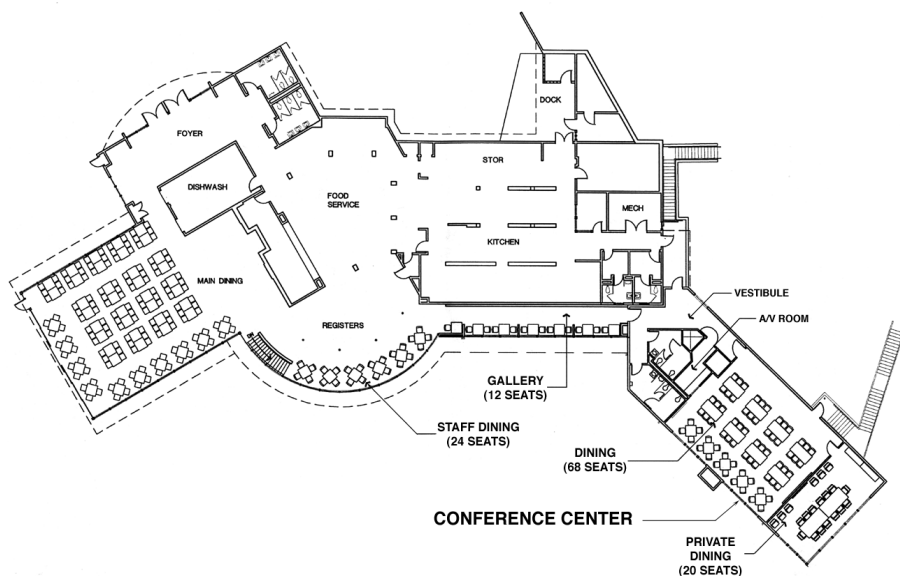
## CONFERENCE CENTER NEARS COMPLETION

What lies beyond those plywood panels in the Cafeteria? With the Conference Center Project now 90 percent complete we'll soon find out. The new 200-m<sup>2</sup> facility's natural oak finishes are in, and work is proceeding on HVAC,

painting, and drop ceilings, with carpeting not far behind. Features will include a dining gallery that connects with the existing cafeteria building, restrooms, an audio-visual projection room, large conference/dining room

seating 68 for dinner and 102 for conferences, and small private dining room seating 16. Features include oak doors, chair rails, and baseboards; recessed and track lighting; ceiling-mounted projection screens; and spectacular views of San Francisco Bay through the full-height picture windows.

The Conference Center is only the most impressive of recent and upcoming improvements to the Cafeteria. The new furniture and carpeting in the Addition will match that recently installed in the existing building. Another new development is the espresso bar in the main dining area. In the near future look for changes in the food service area to improve circulation.



*Building 54 floor plan, showing new conference center.*

## LAB SOON TO BE CFC-FREE

The Heating, Ventilating, Air Conditioning and Refrigeration Shop (HVAC&R) has replaced one of the last two chillers on the Hill that use class 1 ozone-depleting substances, or Chloroflourocarbons (CFCs). Both chillers are in the basement of Building 50B. The timing of the replacement was dictated in part by the phase-out at the end of 1995 of CFC production in the United States. It also coincides with upgrading of the HVAC system in 50B for NERSC.

Where possible, refrigeration units on the Hill have been converted to use EPA-recommended Hydrochloroflourocarbons (HCFCs), which aren't scheduled for phase-out until 2030. Because the 50B units are about 30 years old, though, it is more cost-effective to replace them. The other 50B chiller is scheduled for replacement in the near future.

## STORES STOCKS METRIC TOOLS, FASTENERS

The Lab took a step forward on the path to metrication recently when Stores began stocking metric tools and fasteners. Items include allen wrenches, socket wrenches, box and open-end wrenches, calipers, rulers and tape rules, gages, drill bit sets, taps and dies; as well as a broad range of ISO fasteners and Grade-5 rated fasteners. The lead person in stores on this effort is Jacques Pryor, with Dee Wentz and Cheryl Durban carrying out the ordering. For assistance in identifying the items you need, stop by Stores at their new onsite location in Building 78 or call Jacques Pryor at extension 5087. You can fax your Stores order form to extension 4211 or mail it to Building 78.

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